



50-Watt-Hour Universal Notebook Battery (UPB50)

User's Manual

Introduction

Thank you for purchasing APC's 50-Watt-Hour Universal Notebook Battery (UPB50). This slim, lightweight external battery pack is compatible with many notebook computers in the market today.

Features

- Compact design weighs less than one pound
- Up to four hours of additional runtime¹ for your notebook computer
- Two selectable output voltages
- Four LED status indicators
- Letter coded power tips provide compatibility with most notebook computers in the market today
- Compatible with APC Universal Power Adapters
- Up to 70 Watts continuous power and 80 Watts peak power

Inspection

Prior to use, please check the package contents for the following items. If any item listed below is not in the package, please contact APC Customer Service at 800.800.4APC (800.800.4272).

- Universal Notebook Battery (UPB50)
- Input / Output Power Cable
- Conversion Plug & Jack Tips
- Compatibility Guide

Safety Precautions

Please read the following warnings carefully before using the UPB50. Use the product according to the procedures outlined in this manual.



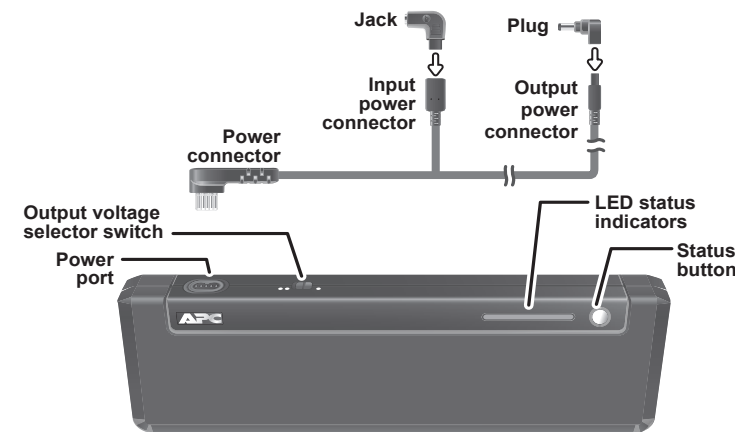
Warnings:

- **Caution:** Burn Hazard
- Do not attempt to disassemble or alter any part of this product.
- Do not store outside of the following temperature range: -4~140°F (-20~60°C).
- Do not operate outside of the following range: 32~104°F (0~40°C), as this will damage or reduce the life of the battery.
- Do not allow this product to come in contact with water or other liquids. If any liquid should reach the interior of the battery, immediately unplug the battery from your notebook. Continued use of the battery is not recommended, and may result in fire or electric shock.
- Do not expose the battery to a direct flame or heat source, as the battery may explode.

Prior to Use

This user manual provides operating instructions for the UPB50. Please read the entire user manual prior to use and remember to register your product. You can do this via the enclosed warranty card or by visiting <http://warranty.apc.com> and using keycode *p668y*.

Figure 1: Components



A. Setting the Output Voltage

Confirm that the UPB50 is compatible with your notebook computer by finding the corresponding model listing and voltage requirements in the *Universal Notebook Battery Compatibility Guide*. Individual voltage ratings can also be found on your notebook computer's system label or power adapter label.

1. Remove advisory sticker from output voltage selector switch.
2. Slide the output voltage selector switch toward the symbol representing the notebook's required voltage.
 - = Notebook computers with 15V ~ 17V output
 - = Notebook computers with 18V ~ 24V output

3. Press the **Status** button to make the changes effective. This will also turn on the UPB50. If this is the first time using the battery, connect a notebook power adapter to the UPB50. Refer to *Section C. Charging the Battery*.

B. Selecting the Correct Tips

Plug: Each is marked with an uppercase letter that corresponds to the notebook computer models listed in the *Universal Notebook Battery Compatibility Guide*. It is used to connect output power from the UPB50 to the input DC voltage port on your notebook.

Jack: Each is marked with a lowercase letter that corresponds to the notebook computer models listed in the *Universal Notebook Battery Compatibility Guide*. It is used to connect the UPB50 to a power source such as your notebook power adapter or any APC Universal Power Adapter (sold separately).

Example: IBM® X31 uses Plug "B" and Jack "b". See *Figure 1*.

C. Charging the Battery

Once the output voltage setting and appropriate plugs / jacks have been selected, APC recommends fully charging the UPB50 prior to use. See *Figure 1*.

1. Attach the plug to the UPB50 output power connector.
2. Attach the jack to the UPB50 input power connector.
3. Connect your notebook's power adapter, any APC Universal Power Adapter, or other compatible power adapter to the battery.
4. The UPB50 indicators should illuminate. If not, ensure the power adapter is connected to a power source and the power source is ON. See *Troubleshooting* for additional details.
5. Charge the UPB50 for at least three hours or until fully charged, prior to first use.

D. Operation

When the UPB50 is properly connected to your notebook computer, the notebook computer will appear to be on utility power. For optimal battery runtime, adjust your notebook computer's power settings. (Refer to notebook user manual or control panel for more information on changing power mode settings.)

If your notebook power adapter, APC Universal Power Adapter, or other compatible power adapter is removed from the UPB50, the UPB50 will serve as the primary power source for your notebook computer. If any of these notebook adapters are present, power will pass through the UPB50 to your notebook computer.

E. Checking the Battery Status

The status of the battery is indicated by four LED status indicators and can be checked at any time, by pressing the **Status** button. The various battery status conditions are described below:

Charge

The LED status indicators will light up sequentially as each level of charge is reached. Continue charging until the four white indicators are lit together and then turn off, indicating the UPB50 is fully charged.

Discharge

Press the **Status** button to display the discharge status. The LED indicators will illuminate and display the remaining charge level. The number of LEDs that light up indicate the level of discharge as described in *Figure 2*.

Sleep Mode

When the UPB50 has been stored or has not been attached to a notebook computer for 15 minutes or more, it will enter **Sleep Mode** status. To wake up the battery, press the **Status** button for 1~3 second(s) and then release. The status indicators will illuminate, showing the battery is on and ready for use.

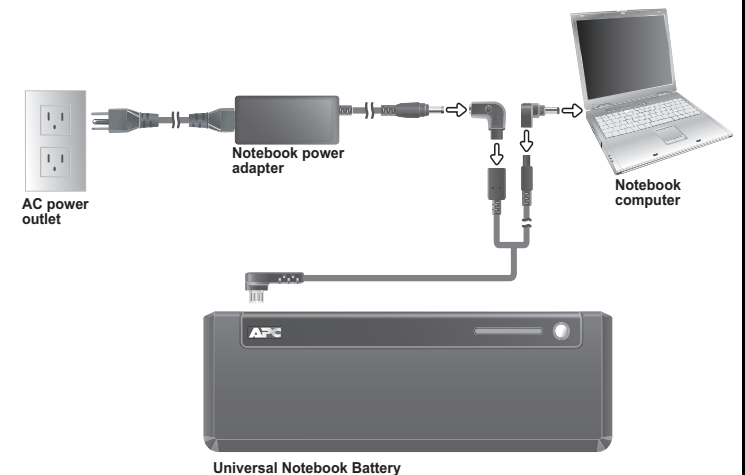
Figure 2: LED Status Indications

Display	Status Indicators Lit	When Charging	When Discharging
	All LEDs off	Fully charged	
	4	85 ~ 100%	85 ~ 100%
	3	55 ~ 85%	55 ~ 85%
	2	25 ~ 55%	25 ~ 55%
	1	Less than 25%	Less than 25%
	All LEDs off		Fully depleted

F. Changing Voltage While Battery is in Use

If the output voltage selector switch is moved while the battery is in use, output power to your notebook will be interrupted. To resume power output, ensure that the output voltage selector switch is set to the correct output voltage and press the **Status** button for 1~3 second(s). The status indicators will illuminate, indicating the UPB50 has resumed power output.

Figure 3: Typical Connection Diagram



G. Specifications

Item	Specification
Capacity	53 Watt-hours
Output Power	70 Watts Maximum Continuous Power 80 Watts Peak Power (short duration)
Output Voltage	• = 16V, 4.4A •• = 19V, 3.6A
Input Power Source	OEM notebook power adapter APC Universal Power Adapter
Charge Time	Recharges to 100% in 3 hours
Size (H x W x D)	8.66" x 2.76" x 0.87" (220mm x 70mm x 22mm)
Weight	0.95 lbs (432 g): battery only 1.16 lbs (525 g): battery, power cable, one plug and one jack
Environmental Storage	-4 ~ 140°F (-20 ~ 60°C)
Operation	32 ~ 104°F (0 ~ 40°C)
Agency Approvals	TUV / GS, cUL, FCC, CE, C-tick, VCCI Note: This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference which may cause undesired operation.

H. Troubleshooting

Problem	Possible Cause	Solution
The UPB50 is not charging the notebook when the AC adapter is connected to the UPB50.	Notebook AC adapter output voltage does not match the output voltage setting on the output voltage selector switch.	Check the voltage rating from the system label on the notebook or power adapter. Slide the output voltage selector switch to the corresponding voltage. Press the Status button for 1~3 seconds and then release. The LED indicators will illuminate and the battery will resume power output.
	The UPB50 has automatically shut down due to abnormally high temperature.	Remove the UPB50 from the enclosed area, and let it cool for a few minutes. Press the Status button for 1~3 second(s) and then release. The unit will recover from thermal protection mode.
	The notebook being used is drawing more than 70W from the UPB50.	The UPB50 is designed to deliver 70 Watts of continuous output power. Perform one of the following to resume the UPB50 power output: 1. Fully charge the notebook internal battery using the adapter provided with the notebook; connect the UPB50 to the notebook. OR: 2. Change the power settings on the notebook to conserve battery power.
When not connected to a notebook computer, UPB50 does not provide power (LED indicators do not illuminate).	When the UPB50 has been stored or has not been connected to a notebook computer for 15 minutes or more, it will enter Sleep Mode status.	Press the Status button for 1~3 second(s) and then release. The Status indicators will illuminate and the battery will resume power output. If no indicators are lit, charge the UPB50.

I. Recycling, Storage, and Battery Life

The UPB50 should be disposed of properly. Please do not incinerate or dispose of in trash receptacles. For more information about APC's battery recycling program, visit: mobilecomputing.apc.com.

For best results, do not store the UPB50 where there is excessive heat or cold, as such environments can damage the battery pack and reduce battery life. If storing the UPB50 for an extended period, completely discharge and recharge the unit before the next use.

To completely discharge: Attach the UPB50 to a notebook and wait until all LED indicators are off during use.

To completely charge: Attach any compatible notebook power adapter to the UPB50 and continue charging it until all Status indicators are extinguished.

For best results, the UPB50 should be completely discharged and recharged once every 3 months. This will condition the cells inside the battery and ensure the UPB50 delivers the most capacity available.

J. Limited Warranty

APC warrants its products to be free from defects in materials and workmanship under normal use and service for one (1) year from the date of purchase for the original purchaser. Its obligation under this warranty is limited to repairing or replacing, at its sole option, any such defective products. To obtain service under warranty, you must obtain a Returned Material Authorization (RMA) number from APC or an APC Service Center with transportation charges prepaid. It must be accompanied by a brief description of the problem and proof of date and place of purchase. This warranty applies only to the original purchaser.

K. Contact Information

American Power Conversion

132 Fairgrounds Rd

West Kingston, RI 02892, USA

Toll Free: 800.800.4APC (800.800.4272)

Toll: (1) 401.789.5735

Fax: (1) 401.789.3710

Internet: <http://www.apc.com>

¹ Actual runtimes vary according to notebook model and power setting; please refer to Runtime Chart.